

PATENT COOPERATION TREATY

PCT

NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Assistant Commissioner for Patents
United States Patent and Trademark
Office
Box PCT
Washington, D.C. 20231
ÉTATS-UNIS D'AMÉRIQUE

in its capacity as elected Office

Date of mailing: 09 December 1999 (09.12.99)	
International application No.: PCT/GB99/01767	Applicant's or agent's file reference: J00040724WO
International filing date: 03 June 1999 (03.06.99)	Priority date: 03 June 1998 (03.06.98)
Applicant: STUBBS, Martin	

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International preliminary Examining Authority on:
06 October 1999 (06.10.99)☐ in a notice effecting later election filed with the International Bureau on:
_____2. The election ☒ was☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland

Facsimile No.: (41-22) 740.14.35

Authorized officer:

J. Zahra

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INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference J00040724W0	FOR FURTHER ACTION see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. PCT/GB 99/ 01767	International filing date (day/month/year) 03/06/1999	(Earliest) Priority Date (day/month/year) 03/06/1998
Applicant ORANGE PERSONAL COMMUNICATIONS SERVICES LIMITED		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 3 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

4. With regard to the **title**,

☐ the text is approved as submitted by the applicant.

☒ the text has been established by this Authority to read as follows:

DYNAMIC ALLOCATION OF RADIO RESOURCES IN A PACKET SWITCHED COMMUNICATIONS-SYSTEM

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.

☒ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

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☐ None of the figures.

INTERNATIONAL SEARCH REPORT

International Application No

/GB 99/01767

A. CLASSIFICATION OF SUBJECT MATTER

IPC 6 H04Q7/22

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 6 H04Q

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 666 348 A (THORNBERG CARL MAGNUS ET AL) 9 September 1997 (1997-09-09) column 3, line 30 -column 8, line 52	1-6, 8-10, 20
A	column 9, line 45 -column 11, line 23 ---	13, 14
X	EP 0 732 826 A (IBM) 18 September 1996 (1996-09-18)	1-12, 17-20
A	column 11, line 7 -column 15, line 45 ---	27, 28
X	EP 0 782 364 A (LSI LOGIC CORP) 2 July 1997 (1997-07-02)	21-26
A	column 3, line 56 -column 4, line 9 column 4, line 47 -column 6, line 10 --- -/--	16, 29



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

° Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

21 September 1999

Date of mailing of the international search report

28/09/1999

Name and mailing address of the ISA

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Authorized officer

Lopez-Pérez, M-C

INTERNATIONAL SEARCH REPORT

International Application No
PCT/GB 99/01767

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
E	WO 99 41920 A (NOKIA MOBILE PHONES LTD ;PASANEN JARI (FI); HAEMAELAEINEN JARI (FI) 19 August 1999 (1999-08-19) page 7, line 4 - line 33 page 13, line 1 - line 35 page 18, line 5 -page 19, line 34 -----	16-20, 29

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/GB 99/01767

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 5666348 A	09-09-1997	AU 7005196 A CN 1201583 A EP 0852102 A WO 9711570 A	09-04-1997 09-12-1998 08-07-1998 27-03-1997
EP 0732826 A	18-09-1996	US 5625877 A JP 8279816 A	29-04-1997 22-10-1996
EP 0782364 A	02-07-1997	JP 9219890 A	19-08-1997
WO 9941920 A	19-08-1999	NONE	

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

REC'D 13 SEP 2000

Applicant's or agent's file reference J00040724WO		See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
FOR FURTHER ACTION		
International application No. PCT/GB99/01767	International filing date (day/month/year) 03/06/1999	Priority date (day/month/year) 03/06/1998
International Patent Classification (IPC) or national classification and IPC H04Q7/22		
Applicant ORANGE PERSONAL COMMUNICATIONS SERVICES LIMITED et		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.


2. This REPORT consists of a total of 11 sheets, including this cover sheet.

- ☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☒ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☒ Certain defects in the international application
- VIII ☒ Certain observations on the international application

Date of submission of the demand 06/10/1999	Date of completion of this report 11.09.2000
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer Alonso, R Telephone No. +49 89 2399 7515



**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/GB99/01767

I. Basis of the report

1. This report has been drawn on the basis of (*substitute sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments.*):

Description, pages:

1-30 as originally filed

Claims, No.:

1-29 as originally filed

Drawings, sheets:

1/11-11/11 as originally filed

2. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
☐ the claims, Nos.:
☐ the drawings, sheets:

3. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

4. Additional observations, if necessary:

III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been examined in respect of:

- ☐ the entire international application.
☒ claims Nos. 19,28.

because:

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/GB99/01767

☐ the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (*specify*):

☒ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. 19,28 are so unclear that no meaningful opinion could be formed (*specify*):

see separate sheet

☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.

☐ no international search report has been established for the said claims Nos. .

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims	1-29
	No:	Claims	
Inventive step (IS)	Yes:	Claims	
	No:	Claims	1-29
Industrial applicability (IA)	Yes:	Claims	1-29
	No:	Claims	

2. Citations and explanations

see separate sheet

VII. Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

see separate sheet

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/GB99/01767

VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

see separate sheet

III. Non-establishment of report

I

The following documents have been considered for the purposes of this report:

D1= EP-A-0732826

D2= US-A-5666348

D3= EP-A-0782364

II

1. No opinion can be formed as to whether the subject-matters of claims 19 and 28 are novel, involve an inventive step or are industrially applicable since claim 19 is not formulated in terms of technical features and claim 28 presents unclarities (see also objections under section VIII), so that it is not clear what they are actually directed to.

V. Reasoned statements under Article 35(2) (N,IS,IA)

1. The independent claim 1 lacks inventive step over the disclosure of document D1 combined with the common general knowledge of the person skilled in the art.

Document D1, which represents the closest prior art discloses, according to the majority of the features of present claim 1, a method of controlling communication between user stations of a mobile communication system having a radio interface, said method comprising providing a data packet handler connected to a packet data network (Fig. 1, reference sign 104; Column 12, lines 41-43); dynamically assigning radio resources for the transfer of data packets carrying call data for said call over the radio interface (Column 11, lines 35-37; Column 13, lines 23-25), such that the amount of radio resources

assigned varies in accordance with the amount of call data (Column 14, lines 12-24) to be transferred at different points (Column 14, lines 16-18) in said call;

controlling the transfer of data packets between stations, using said data packet handler (Column 11, lines 50-55)

The method of claim 1 differs from that known from D1 in that control data relating to the state of the call is held.

However, although there is not an explicit disclosure in document D1 relating to the control data, it is obvious that any communication system needs control data relating to the calls. In D1, for example, wherein channels are dynamically assigned, it is evident the need of data indicating which channels are assigned to a certain call. As a consequence, no inventive significance can be recognised in the use of control data relating to the state of the call.

Claim 1, therefore, lacks inventive step and does not meet the requirements of Article 33 (3) PCT.

2. The same objection could have been equally formulated starting from document D2 wherein all the essential features of present claim 1 are disclosed (Fig. 1; Column 5, lines 16-19; Column 7, lines 7-14).
3. Independent claim 20 corresponds to claim 1 in terms of an apparatus (mobile station). Claim 20, therefore, lacks inventive step for essentially the same reasons given for claim 1. As a consequence, claim 20 does not meet the requirements of Article 33 (3) PCT.
4. The independent claim 21 lacks inventive step over the disclosure of document D3 combined with the common general knowledge of the person skilled in the art.

Document D3 discloses a method of conducting communication between

user stations using a mobile communication system (Fig. 1; abstract), each said user station comprising a camera for picking up an image of the user and a display for displaying an image of the remote party (Column 7, lines 5-17), said method comprising establishing a data transfer connection between said user stations (Column 3, lines 6-13) .

The method of claim 21 differs from that known from D3 in that the communication is half-duplex.

However, half-duplex transmission is a transmission mode well known in the field, the selection of said mode, among other possibilities, falling within the competences of the skilled person. Therefore, no inventive significance can be recognized in the use of half-duplex transmission for the system known from D3.

Claim 21, as a consequence, does not meet the requirements of Article 33 (3) PCT.

5. Independent claim 24 corresponds to claim 21 in terms of an apparatus (mobile station). Claim 24, therefore, lacks inventive step for essentially the same reasons given for claim 21. As a consequence, claim 24 does not meet the requirements of Article 33 (3) PCT.
6. The present broad formulation of independent claim 29 lacks inventive step over the disclosure of document D3, combined with the common general knowledge of the skilled person.

Document D3 discloses a method for controlling communication between user stations using a GSM-type mobile communication system (Abstract; Fig. 1) comprising:
holding control data, indicating the state of a call between a first user station and a second user station;
controlling the transfer of data packets between said stations according to the control data (Column 3, lines 41-54).

The method of claim 29 differs from that known from D3 only in that the control is made by a packet handler (instead of a network controller) which is connected to a GPRS support node.

However the performance of the control by a certain device within a certain implementation of the GSM system can not be considering in itself as involving an inventive step, as the selection of a certain model for the implementation of a system (in this case the GPRS) and the implementation of the control by a certain device are minor implementation details falling within the competence of the skilled person.

Claim 29, as a consequence, does not meet the requirements of Article 33 (3) PCT.

7. The dependent claims 2 to 15, 17, 18, 22, 23, 25 to 27 do not seem to contain any subject-matter which, in combination with the subject-matter of the claim on which they are dependent, would lead to a claim involving inventive activity (Article 33 (3) PCT).

Their subject-matter is indeed either directly derivable from the above-cited document or concerns simple embodiments without inventive merit in themselves.

VI. Certain documents cited

The document WO-99/41920 was published on 19.08.99, with filing date of 9.02.99 and valid priority date of 12.02.98.

VII. Certain defects in the international application (form or context)

1. Contrary to the requirements of Rule 5.1 (a) (ii) PCT, the relevant background art disclosed in the documents D1, D2 and D3 is not mentioned in the description, nor are these documents identified therein.

2. Independent claims 1, 16, 20, 21, 24 and 29 are not in the two-part form in accordance with Rule 6.3 (b) PCT, which in the present case would be appropriate, with those features known in combination from the prior art (document D1, D2 or D3) being placed in a preamble (Rule 6.3(b)(i) PCT) and with the remaining features being included in a characterising part (Rule 6.3 (b)(ii) PCT).
3. According to the requirements of Rule 6.2 (b) PCT, reference signs relating to the drawings should follow the corresponding features defined in the independent claim 1.

VIII. Certain observations on the international application (clarity)

1. Independent claim 1 does not meet the requirements of Article 6 PCT for the reasons set out below:

It is not clear what is meant by '...transferred at different points in said call'. It is unclear, for example, whether the expression relates to the transmission of the call to different destinations, the radio resources being assigned depending on the amount of data to be transmitted to each destination, or if the radio resources are assigned according to the amount of data to be transmitted at the different points of the mobile system through which the call is transmitted. Moreover, it is also not clear to which radio resources the claim relates to. As the claim is formulated as present, said radio resources are understood as features of the radio connection between the mobile stations and the corresponding base station (e.g. bandwidth, number of channels, frequencies,...); this interpretation, however, is not supported by the description.

Moreover the overall structure of the mobile system is not defined so that it is not clearly understandable, for example, the function of the data packet handler and the reason for its connection to the packet data network or whether said packet handler and/or said packet data network are part or

not of the mobile system. The claim is understood as relating to the communication between mobile stations connected to the mobile system so that the provision of the packet handler connected to a different network is unclear.

Furthermore, the different steps of the method do not provide a clear 'picture' of the operations being performed. It is defined as second step the holding of control data indicating the state of the call. However, the assignment of resources for a call should normally correspond to the first stage (set-up) that, once performed, allows the call to take place so that data relating to the call can be stored and the call itself can be controlled.

Also, it is not clear what is meant by 'controlling...using said data packet handler..'. The control should be effected by a certain device which is not indicated. If the term 'using' defines that the packet handler participates in the control of the call in a certain manner but is not the control device, it is not clear which function is then performed by the packet handler and the use of the control data in order to perform said function. The same objection applies to the independent **claim 29**.

2. Independent claim 16 does not meet the requirements of Article 6 PCT for the reasons set out below:

The expression '..whereby routing to a second user station is identified by a gateway ..' is unclear. It is not clear whether the gateway effectively routes the packet to the second station or if the term 'identify' relating to the routing implies only, for example, that the gateway interprets the recipient ID and retrieves related routing information. Also, it is not clear whether the mapping of the recipient ID to a packet network protocol address is performed by the GPRS or not.

Moreover, the transmission of a second data packet to the gateway is unclear as it is not defined which is the device transmitting said packet. Also the last step of the method suggests that the mapping is not

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/GB99/01767

performed in the gateway.

3. Independent claim 19 does not meet the requirements of Article 6 PCT because lacking essential features:

The claim defines a packet handler adapted to perform data packet handling functions in the method of any of the previous claims. However, none of the features defining the packet handler as a device are defined in the claim so that it is not clear the subject-matter for which protection is sought.

4. Independent claim 20 does not meet the requirements of Article 6 PCT for the reasons set out below:

The definition of the claim is unclear in relation with the reference made to claim 19, as said claim is unclear (see previous paragraph). Moreover in line with the objection raised for claim 1, it is unclear which radio resources are meant, the request of resources for transmission of data packets not being clearly supported by the description.

5. Independent claim 28 does not meet the requirements of Article 6 PCT because lacking essential features:

It is not clear in claim 28 what is meant by a 'group dispatch mode operation' and correspondingly, what is to be understood as the transmission of data in said mode. Said unclarity renders also unclear the subject-matter for which protection is sought.